

## Appendix

### **The Effect of Primary Organic Particles on Emergency Hospital Admissions among the Elderly in 3 US Cities**

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**Table A-1:** Primary organic particles by chemical structure. The species used in our primary analyses are in **bold**.

Pollutant Category	Primary Organic Particles
n-Alkanes	n-pentadecane, n-hexadecane, n-heptadecane, n-octadecane, n-nonadecane, n-icosane, <b>n-heneicosane</b> , <b>n-docosane</b> , <b>n-tricosane</b> , <b>n-tetracosane</b> , <b>n-pentacosane</b> , <b>n-hexacosane</b> , <b>n-heptacosane</b> , <b>n-octacosane</b> , <b>n-nonacosane</b> , <b>n-triacontane</b> , <b>n-hentriacontane</b> , <b>n-dotriacontane</b> , <b>n-tritriacontane</b> , <b>n-tetratriacontane</b> , <b>n-pentatriacontane</b> , <b>n-hexatriacontane</b> , <b>n-heptatriacontane</b> , n-octatriacontane, n-nonatriacontane
Iso/anteiso-alkanes	anteiso-nonacosane, <b>anteiso-triacontane</b> , <b>anteiso-hentriacontane</b> , <b>anteiso-dotriacontane</b> , anteiso-tritriacontane, <b>iso-nonacosane</b> , <b>iso-triacontane</b> , <b>iso-hentriacontane</b> , iso-dotriacontane, iso-tritriacontane, iso-tetratriacontane
Cyclohexanes	octylcyclohexane, decylcyclohexane, tridecylcyclohexane, <b>heptadecylcyclohexane</b> , <b>nonadecylcyclohexane</b> ,
Hopanes	$\alpha\alpha$ - $\beta\alpha$ -norhopane, $\alpha\alpha$ -hopane, $\alpha\beta$ -hopane, $\alpha\beta$ R-bishomohopane, $\alpha\beta$ R-homohopane, $\alpha\beta$ S-bishomohopane, $\alpha\beta$ S-homohopane, $\beta\alpha$ -hopane, 22,29,30-norhopane, 22,29,30-trisnorneophopane, 22,29,30-trisnorhopane, 22R-pentashomohopane, 22R-tetrahomohopane, 22R-trishomohopane, 22S-pentashomohopane, 22S-tretrahomohopane, 22S-trishomohopane
Steranes	$\alpha\alpha\alpha$ 20R-Cholestane, $\alpha\alpha\alpha$ 20R24R-Ethylcholestane, $\alpha\alpha\alpha$ 20R24R-Methylcholestane, $\alpha\alpha\alpha$ 20S-Cholestane, $\alpha\alpha\alpha$ 20S24RS-Ethylcholestane, $\alpha\alpha\alpha$ 20S24S-Methylcholestane, $\alpha\beta\beta$ 20R-Cholestane, $\alpha\beta\beta$ 20R24R-Ethylcholestane, $\alpha\beta\beta$ 20R24S-Methylcholestane, $\alpha\beta\beta$ 20S-Cholestane, $\alpha\beta\beta$ 20S24R-Ethylcholestane, $\alpha\beta\beta$ 20S24S-Methylcholestane
PAH	acenaphthene, <b>acenaphthylene</b> , anthracene, <b>benz[a]anthracene-[7,12]dione</b> , benzo[a]anthracene, benzo[a]fluoranthene, benzo[a]pyrene, <b>benzo[b]fluoranthene</b> , <b>benzo[e]pyrene</b> , benzo[ghi]perylene, <b>benzo[k]fluoranthene</b> , chrysene, coronene, cyclopenta[cd]pyrene, dibenzo[ah]anthracene, <b>fluoranthene</b> , fluorene, indeno[123-cd]pyrene, methylchrysene, <b>methylfluoranthene</b> , perylene, <b>phenanthrene</b> , picene, pyrene, retene, <b>9-fluorenone</b>

**Table A-2:** Pollutant summary statistics, Atlanta. Concentrations expressed in ng/m<sup>3</sup>, except from OC (μg/m<sup>3</sup>)

	Mean	St.Dev.	25%	Median	75%	% Miss
OC	3.498	2.054	2.211	3.135	4.165	23.6
<i>n-Alkanes</i>						
n-heneicosane	0.920	1.622	0.103	0.330	1.076	8.9
n-docosane	1.135	1.834	0.122	0.468	1.445	8.9
n-tricosane	1.880	2.262	0.447	1.050	2.380	8.9
n-tetracosane	1.580	1.784	0.498	0.975	1.988	8.9
n-pentacosane	2.041	2.314	0.696	1.296	2.585	8.9
n-hexacosane	1.466	2.044	0.463	0.888	1.663	8.9
n-heptacosane	1.701	2.340	0.608	1.065	1.998	8.9
n-octacosane	1.069	1.663	0.346	0.645	1.172	9.1
n-nonacosane	2.263	3.636	0.738	1.419	2.691	9.1
n-triacontane	0.919	1.236	0.296	0.574	1.088	9.1
n-hentriacontane	1.735	2.095	0.588	1.081	2.105	9.1
n-dotriacontane	0.499	0.662	0.130	0.274	0.589	9.1
n-tritriacontane	0.647	0.790	0.178	0.383	0.786	9.2
n-tetracontane	0.370	0.508	0.082	0.183	0.449	9.5
n-pentatriacontane	0.443	0.641	0.090	0.211	0.540	9.5
n-hexatriacontane	0.217	0.347	0.016	0.093	0.287	11.6
n-heptatriacontane	0.236	0.390	0.001	0.077	0.321	15.3
<i>Iso-/Anteiso-Alkanes</i>						
iso-nonacosane	0.113	0.193	0.031	0.064	0.125	9.2
anteiso-nonacosane	0.077	0.105	0.026	0.047	0.092	9.2
iso-triacontane	0.066	0.084	0.020	0.039	0.075	9.2
anteiso-triacontane	0.203	0.281	0.053	0.102	0.222	9.3
iso-hentriacontane	0.235	0.298	0.062	0.121	0.267	9.2
anteiso-hentriacontane	0.119	0.154	0.031	0.069	0.142	9.2
iso-dotriacontane	0.114	0.147	0.029	0.061	0.138	9.2
<i>Cyclohexanes</i>						
heptadecylcyclohexane	0.125	0.222	0.018	0.052	0.139	9.0
nonadecylcyclohexane	0.101	0.134	0.027	0.058	0.121	9.1
<i>Hopanes</i>						
$\alpha\alpha$ - $\beta\alpha$ -norhopane	0.052	0.129	0.013	0.027	0.049	9.2
$\alpha\alpha$ -hopane	0.017	0.096	0.004	0.006	0.012	9.4
$\alpha\beta$ -hopane	0.225	0.310	0.057	0.129	0.259	9.1
$\alpha\beta$ -norhopane	0.355	0.512	0.080	0.196	0.405	9.1
$\alpha\beta$ R-bishomohopane	0.050	0.075	0.013	0.028	0.055	9.4
$\alpha\beta$ R-homohopane	0.163	0.260	0.035	0.082	0.173	9.2
$\alpha\beta$ S-bishomohopane	0.067	0.093	0.017	0.038	0.076	9.4
$\alpha\beta$ S-homohopane	0.178	0.273	0.037	0.090	0.196	9.2
$\beta\alpha$ -hopane	0.032	0.123	0.007	0.015	0.028	9.6
22,29,30-norhopane	0.068	0.125	0.016	0.037	0.073	9.1
22,29,30-trisnorneophopane	0.078	0.113	0.021	0.046	0.085	9.1
22,29,30-trisnorphopane	0.079	0.121	0.018	0.043	0.087	9.2
22R-pentashomohopane	0.018	0.024	0.005	0.010	0.021	13.0
22R-tetrahomohopane	0.018	0.024	0.005	0.011	0.021	10.6
22R-trishomohopane	0.031	0.040	0.009	0.018	0.035	9.6
22S-pentashomohopane	0.027	0.038	0.007	0.015	0.030	13.0
22S-tretrahomohopane	0.027	0.037	0.007	0.015	0.031	10.5
22S-trishomohopane	0.051	0.092	0.013	0.027	0.056	9.6
<i>PAH</i>						
acenaphthylene	0.108	0.163	0.021	0.054	0.128	14.2
benzo [a] anthracene [7,12] dione	0.084	0.219	0.010	0.029	0.073	15.7
benzo [b] fluoranthene	0.169	0.493	0.016	0.043	0.126	9.6
benzo [e] pyrene	0.162	0.428	0.016	0.045	0.117	9.6
benzo [k] fluoranthene	0.156	0.402	0.017	0.044	0.129	9.4
chrysene	0.185	0.523	0.029	0.060	0.139	9.2
cyclopenta [cd] pyrene	0.222	0.692	0.002	0.017	0.135	19.1
fluoranthene	0.150	0.259	0.035	0.073	0.152	9.0
methylchrysene	0.012	0.025	0.001	0.004	0.011	21.2
methylfluoranthene	0.024	0.058	0.004	0.009	0.019	17.5
phenanthrene	0.068	0.094	0.015	0.037	0.084	8.9
pyrene	0.108	0.201	0.026	0.050	0.107	9.0
retene	0.138	0.224	0.019	0.051	0.168	9.0
9-fluorenone	0.121	0.238	0.017	0.043	0.112	9.0

**Table A-3:** Pollutant summary statistics, Birmingham. Concentrations expressed in ng/m<sup>3</sup>, except from OC (μg/m<sup>3</sup>)

	Mean	St.Dev.	25%	Median	75%	% Miss
OC	3.462	2.338	1.910	2.845	4.346	6.1
<i>n-Alkanes</i>						
n-heneicosane	0.879	2.116	0.024	0.270	0.853	9.1
n-docosane	1.231	2.431	0.046	0.468	1.380	9.1
n-tricosane	1.836	2.704	0.280	0.881	2.208	9.1
n-tetracosane	2.128	2.769	0.415	1.040	2.709	9.1
n-pentacosane	2.333	2.962	0.530	1.284	2.997	9.1
n-hexacosane	2.120	3.039	0.411	1.005	2.389	9.1
n-heptacosane	2.164	3.040	0.511	1.202	2.538	9.2
n-octacosane	1.312	2.019	0.329	0.723	1.421	9.3
n-nonacosane	2.538	3.938	0.669	1.517	3.060	9.4
n-triacontane	1.015	1.410	0.262	0.572	1.161	9.5
n-hentriacontane	1.840	2.218	0.582	1.207	2.288	9.4
n-dotriacontane	0.599	0.801	0.158	0.315	0.685	9.6
n-tritriacontane	0.751	0.826	0.240	0.473	0.942	9.6
n-tetracontane	0.524	0.690	0.120	0.272	0.607	9.8
n-pentatriacontane	0.666	0.872	0.146	0.353	0.786	10.3
n-hexatriacontane	0.320	0.507	0.030	0.125	0.390	13.3
n-heptatriacontane	0.355	0.629	0.001	0.097	0.395	17.9
<i>Iso-/Anteiso-Alkanes</i>						
iso-nonacosane	0.110	0.134	0.030	0.064	0.134	9.5
anteiso-nonacosane	0.098	0.140	0.025	0.052	0.108	9.4
iso-triacontane	0.067	0.096	0.018	0.037	0.073	9.5
anteiso-triacontane	0.195	0.249	0.053	0.108	0.224	9.4
iso-hentriacontane	0.209	0.249	0.053	0.119	0.255	9.5
anteiso-hentriacontane	0.142	0.159	0.042	0.091	0.180	9.5
iso-dotriacontane	0.120	0.149	0.031	0.068	0.148	9.5
<i>Cyclohexanes</i>						
heptadecylcyclohexane	0.133	0.240	0.014	0.053	0.145	9.4
nonadecylcyclohexane	0.122	0.167	0.024	0.064	0.143	9.6
<i>Hopanes</i>						
αα-βα-norhopane	0.066	0.128	0.017	0.032	0.067	9.6
αα-hopane	0.018	0.065	0.005	0.009	0.016	10.3
αβ-hopane	0.295	0.364	0.076	0.166	0.357	9.2
αβ-norhopane	0.429	0.541	0.102	0.251	0.508	9.1
αβR-bishomohopane	0.062	0.075	0.019	0.035	0.071	10.5
αβR-homohopane	0.201	0.274	0.044	0.103	0.234	9.6
αβS-bishomohopane	0.085	0.104	0.025	0.049	0.100	10.3
αβS-homohopane	0.223	0.306	0.045	0.112	0.261	9.6
βα-hopane	0.046	0.100	0.009	0.019	0.045	10.3
22,29,30-norhopane	0.078	0.116	0.023	0.047	0.091	9.2
22,29,30-trisnorneophopane	0.076	0.093	0.025	0.050	0.091	9.5
22,29,30-trisnorphopane	0.117	0.172	0.024	0.059	0.128	9.4
22R-pentashomohopane	0.029	0.035	0.009	0.017	0.033	18.9
22R-tetrahomohopane	0.028	0.032	0.009	0.017	0.032	15.7
22R-trishomohopane	0.043	0.049	0.014	0.026	0.051	12.0
22S-pentashomohopane	0.043	0.055	0.013	0.025	0.050	18.8
22S-tretrahomohopane	0.039	0.048	0.012	0.022	0.045	15.5
22S-trishomohopane	0.067	0.087	0.019	0.037	0.076	11.9
<i>PAH</i>						
acenaphthylene	0.401	0.997	0.039	0.128	0.327	13.8
benzo [a] anthracene [7,12] dione	1.661	3.989	0.044	0.224	1.036	10.7
benzo [b] fluoranthene	4.523	11.322	0.056	0.277	1.995	9.1
benzo [e] pyrene	3.273	7.816	0.042	0.252	1.682	9.1
benzo [k] fluoranthene	2.141	4.743	0.041	0.241	1.653	9.1
chrysene	3.436	7.755	0.096	0.355	2.037	9.1
cyclopenta [cd] pyrene	1.308	9.379	0.006	0.080	0.413	22.7
fluoranthene	2.236	5.410	0.089	0.257	1.446	9.1
methylchrysene	0.268	0.622	0.006	0.023	0.162	19.0
methylfluoranthene	0.722	1.919	0.013	0.048	0.389	17.9
phenanthrene	0.456	1.042	0.025	0.090	0.353	9.1
pyrene	1.804	4.330	0.061	0.184	1.106	9.1
retene	0.133	0.243	0.023	0.057	0.141	9.5
9-fluorenone	0.211	0.437	0.029	0.068	0.206	9.1

**Table A-4:** Pollutant summary statistics, Dallas. Concentrations expressed in ng/m<sup>3</sup>, except from OC ( $\mu\text{g}/\text{m}^3$ )

	Mean	St.Dev.	25%	Median	75%	% Miss
OC	2.409	1.140	1.550	2.201	3.013	5.1
<i>n-Alkanes</i>						
n-heneicosane	0.924	1.334	0.134	0.425	1.002	4.9
n-docosane	1.312	1.734	0.237	0.676	1.600	4.9
n-tricosane	1.687	1.638	0.500	1.136	2.394	4.9
n-tetracosane	1.551	1.402	0.566	1.120	2.063	4.9
n-pentacosane	1.884	1.481	0.793	1.457	2.546	4.9
n-hexacosane	1.320	1.163	0.537	0.988	1.685	4.9
n-heptacosane	1.560	1.193	0.699	1.266	2.007	4.9
n-octacosane	0.919	0.907	0.349	0.642	1.139	4.9
n-nonacosane	2.171	1.911	0.924	1.702	2.922	4.9
n-triacontane	0.713	0.711	0.268	0.472	0.889	4.9
n-hentriacontane	1.700	1.848	0.561	1.151	2.305	4.9
n-dotriacontane	0.335	0.450	0.078	0.166	0.394	4.9
n-tritriacontane	0.522	0.744	0.113	0.261	0.667	4.9
n-tetracontane	0.166	0.301	0.020	0.057	0.162	4.9
n-pentatriacontane	0.209	0.406	0.018	0.068	0.198	4.9
n-hexatriacontane	0.079	0.177	0.001	0.004	0.078	4.9
n-heptatriacontane	0.055	0.149	0.001	0.001	0.035	4.9
<i>Iso-/Anteiso-Alkanes</i>						
iso-nonacosane	0.088	0.123	0.021	0.044	0.099	4.9
anteiso-nonacosane	0.060	0.097	0.012	0.026	0.067	4.9
iso-triacontane	0.043	0.059	0.010	0.022	0.050	4.9
anteiso-triacontane	0.143	0.214	0.028	0.066	0.162	4.9
iso-hentriacontane	0.117	0.165	0.026	0.057	0.136	4.9
anteiso-hentriacontane	0.069	0.108	0.011	0.030	0.078	4.9
iso-dotriacontane	0.054	0.082	0.010	0.025	0.058	4.9
<i>Cyclohexanes</i>						
heptadecylcyclohexane	0.131	0.184	0.023	0.064	0.156	4.9
nonadecylcyclohexane	0.093	0.108	0.031	0.060	0.105	4.9
<i>Hopanes</i>						
$\alpha\alpha$ - $\beta\alpha$ -norhopane	0.030	0.044	0.011	0.017	0.029	4.9
$\alpha\alpha$ -hopane	0.006	0.008	0.002	0.004	0.007	4.9
$\alpha\beta$ -hopane	0.169	0.208	0.064	0.102	0.172	4.9
$\alpha\beta$ -norhopane	0.274	0.320	0.116	0.176	0.282	4.9
$\alpha\beta\text{R}$ -bishomohopane	0.025	0.035	0.007	0.013	0.026	4.9
$\alpha\beta\text{R}$ -homohopane	0.103	0.141	0.032	0.055	0.108	4.9
$\alpha\beta\text{S}$ -bishomohopane	0.036	0.049	0.011	0.019	0.038	4.9
$\alpha\beta\text{S}$ -homohopane	0.122	0.161	0.041	0.066	0.127	4.9
$\beta\alpha$ -hopane	0.018	0.023	0.007	0.010	0.018	4.9
22,29,30-norhopane	0.057	0.061	0.027	0.039	0.059	4.9
22,29,30-trisnorneophopane	0.066	0.074	0.024	0.043	0.079	4.9
22,29,30-trisnorphopane	0.066	0.082	0.021	0.039	0.076	4.9
22R-pentashomohopane	0.007	0.012	0.001	0.003	0.008	4.9
22R-tetrahomohopane	0.009	0.013	0.002	0.004	0.009	4.9
22R-trishomohopane	0.015	0.020	0.004	0.008	0.016	4.9
22S-pentashomohopane	0.012	0.020	0.002	0.006	0.014	4.9
22S-tetrahomohopane	0.013	0.019	0.003	0.007	0.014	4.9
22S-trishomohopane	0.023	0.032	0.007	0.012	0.025	4.9
<i>PAH</i>						
acenaphthylene	0.016	0.016	0.006	0.010	0.020	4.9
benzo [a] anthracene [7,12] dione	0.038	0.072	0.001	0.013	0.041	4.9
benzo [b] fluoranthene	0.067	0.145	0.004	0.015	0.066	4.9
benzo [e] pyrene	0.079	0.168	0.006	0.017	0.075	4.9
benzo [k] fluoranthene	0.059	0.137	0.004	0.012	0.051	4.9
chrysene	0.097	0.163	0.021	0.040	0.107	4.9
cyclopenta [cd] pyrene	0.005	0.013	0.001	0.001	0.004	4.9
fluoranthene	0.111	0.123	0.047	0.074	0.127	4.9
methylchrysene	0.004	0.008	0.001	0.001	0.003	4.9
methylfluoranthene	0.009	0.017	0.002	0.004	0.010	4.9
phenanthrene	0.053	0.062	0.023	0.038	0.063	4.9
pyrene	0.064	0.093	0.022	0.038	0.067	4.9
retene	0.034	0.059	0.007	0.013	0.035	4.9
9-fluorenone	0.101	0.166	0.020	0.038	0.102	4.9

**Table A-5:** n-Alkane factor analysis results, by city. Correlations < 0.40 are not shown for better identification of the factor loadings.

n-Alkanes	Plants	Atlanta	Vehicles	Birmingham	Vehicles	Plants	Dallas	Tire Wear	Vehicles
n-heneicosane ( $C_{21}$ )		0.93		0.93					0.64
n-docosane ( $C_{22}$ )		0.94		0.94					0.71
n-tricosane ( $C_{23}$ )		0.75		0.74					0.86
n-tetracosane ( $C_{24}$ )	0.54	0.62	0.73	0.45					0.89
n-pentacosane ( $C_{25}$ )	0.79		0.85						0.88
n-hexacosane ( $C_{26}$ )	0.85		0.82						0.72
n-heptacosane ( $C_{27}$ )	0.94		0.95						0.67
n-octacosane ( $C_{28}$ )	0.93		0.93						0.56
n-nonacosane ( $C_{29}$ )	0.95		0.92						0.58
n-triacontane ( $C_{30}$ )	0.88		0.84						0.49
n-hentriacontane ( $C_{31}$ )	0.80	0.46	0.72	0.41					0.47
n-dotriacontane ( $C_{32}$ )	0.68	0.64	0.60	0.64					0.75
n-tritriacontane ( $C_{33}$ )	0.55	0.77	0.51	0.73					0.60
n-tetracontane ( $C_{34}$ )		0.92		0.89					0.84
n-pentatriacontane ( $C_{35}$ )	0.93		0.93						0.82
n-hexatriacontane ( $C_{36}$ )	0.83		0.84						0.86
n-heptatriacontane ( $C_{37}$ )	0.76		0.81						0.81

**Table A-6:** Cause-specific daily emergency hospital admissions, by city.

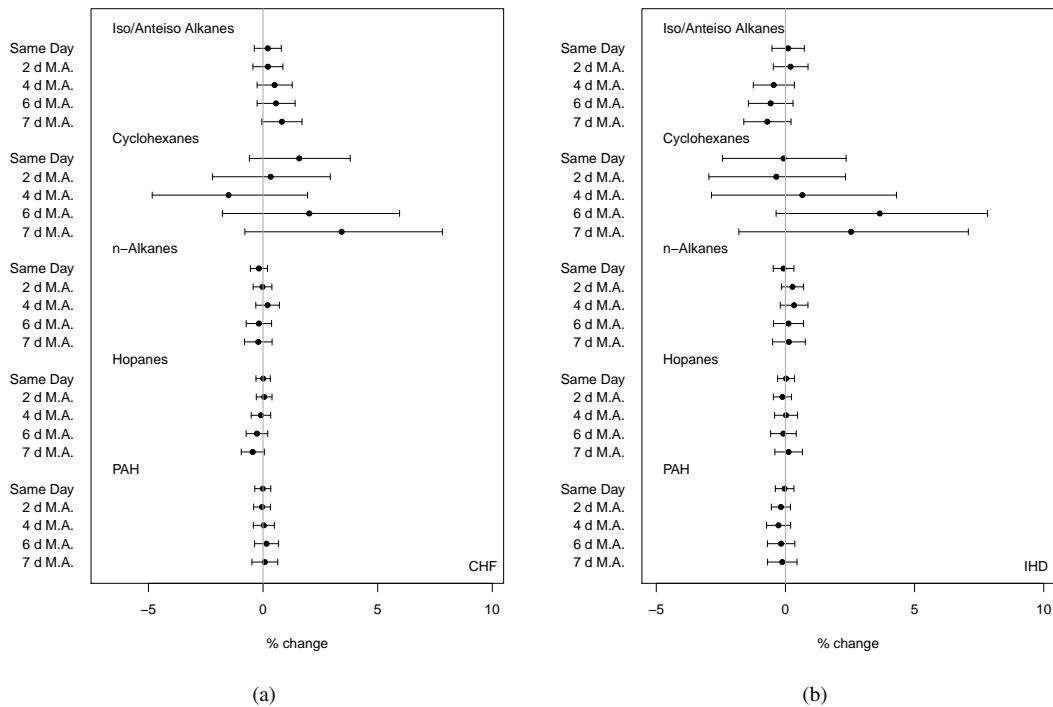
City	Quantiles			
	25%	50%	75%	Max
<b>Total Cardiovascular Admissions</b>				
Atlanta, GA	20	24	28	47
Birmingham, AL	6	9	11	21
Dallas, TX	15	19	22	41
<b>Congestive Heart Failure</b>				
Atlanta, GA	6	8	11	23
Birmingham, AL	1	2	4	9
Dallas, TX	4	6	8	16
<b>Ischemic Heart Disease</b>				
Atlanta, GA	5	7	9	20
Birmingham, AL	2	3	4	11
Dallas, TX	3	5	7	15
<b>Myocardial Infarction</b>				
Atlanta, GA	2	4	5	12
Birmingham, AL	1	1	2	6
Dallas, TX	2	3	4	10
<b>Total Respiratory Admissions</b>				
Atlanta, GA	14	18	22	43
Birmingham, AL	4	6	9	21
Dallas, TX	11	14	18	39
<b>COPD</b>				
Atlanta, GA	2	4	5	14
Birmingham, AL	0	1	2	7
Dallas, TX	2	3	4	11
<b>Pneumonia</b>				
Atlanta, GA	4	6	9	20
Birmingham, AL	1	2	4	11
Dallas, TX	4	5	8	21

**Table A-7:** Percent change (%) in total CVD and respiratory hospital admissions per  $10 \mu\text{g}/\text{m}^3$  of  $\text{PM}_{2.5}$  and  $1 \mu\text{g}/\text{m}^3$  of OC and EC increase for 2- and 7-d averaged exposures.

	2-d exposures			7-d exposures		
	%Change	2.5%	97.5%	%Change	2.5%	97.5%
<i><u>Cardiovascular Admissions</u></i>						
PM <sub>2.5</sub>	0.81	-0.55	2.20	0.07	-1.52	1.69
OC	<b>1.35</b>	0.06	2.64	1.13	-0.34	2.62
EC	1.08	-0.02	2.19	-0.27	-1.61	1.08
<i><u>Respiratory Admissions</u></i>						
PM <sub>2.5</sub>	0.22	-1.34	1.81	-0.71	-2.54	1.15
OC	0.77	-0.65	2.22	0.36	-1.27	2.02
EC	0.81	-0.40	2.04	0.57	-0.91	2.06

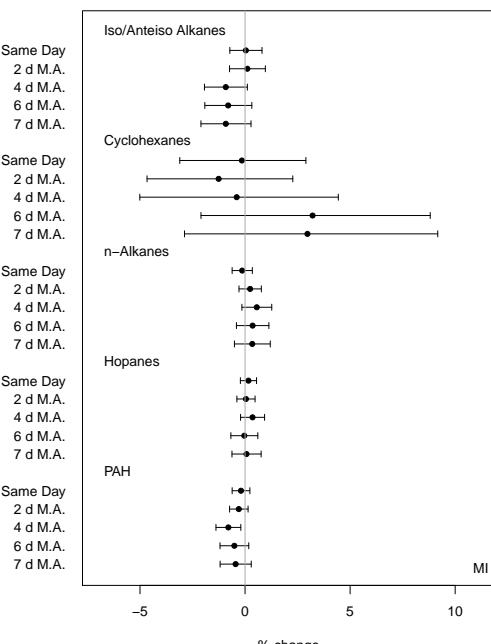
**Table A-8:** Percent change (%) in cause specific hospital admissions per IQR increase in pollutant group for 6- and 7-d averaged exposures.

	6-d exposures			7-d exposures		
	%Change	2.5%	97.5%	%Change	2.5%	97.5%
<i><b>Cardiovascular Admissions</b></i>						
PAHs	-0.095	-0.477	0.288	-0.176	-0.577	0.227
Hopanes	-0.186	-0.528	0.158	-0.211	-0.569	0.149
n-Alkanes	0.072	-0.314	0.459	0.083	-0.327	0.496
Cyclohexanes	<b>2.898</b>	0.369	5.491	<b>3.398</b>	0.635	6.237
Iso-/anteiso-alkanes	-0.202	-0.785	0.384	-0.125	-0.734	0.487
<i><b>CHF</b></i>						
PAHs	0.153	-0.369	0.677	0.076	-0.486	0.642
Hopanes	-0.266	-0.736	0.205	-0.449	-0.951	0.055
n-Alkanes	-0.181	-0.732	0.373	-0.209	-0.808	0.394
Cyclohexanes	2.017	-1.776	5.956	3.429	-0.790	7.828
Iso-/anteiso-alkanes	0.568	-0.256	1.399	0.821	-0.050	1.700
<i><b>IHD</b></i>						
PAHs	-0.168	-0.696	0.364	-0.123	-0.690	0.448
Hopanes	-0.081	-0.576	0.417	0.123	-0.408	0.656
n-Alkanes	0.119	-0.458	0.699	0.133	-0.497	0.767
Cyclohexanes	3.651	-0.362	7.825	2.543	-1.803	7.081
Iso-/anteiso-alkanes	-0.573	-1.432	0.293	-0.702	-1.611	0.217
<i><b>MI</b></i>						
PAHs	-0.509	-1.191	0.177	-0.450	-1.187	0.293
Hopanes	-0.036	-0.675	0.607	0.068	-0.622	0.764
n-Alkanes	0.359	-0.411	1.134	0.343	-0.506	1.199
Cyclohexanes	3.214	-2.097	8.813	2.969	-2.881	9.171
Iso-/anteiso-alkanes	-0.803	-1.914	0.322	-0.915	-2.099	0.282
<i><b>Respiratory Admissions</b></i>						
PAHs	-0.059	-0.455	0.338	-0.104	-0.523	0.315
Hopanes	-0.330	-0.691	0.032	-0.350	-0.730	0.030
n-Alkanes	0.146	-0.264	0.558	0.145	-0.293	0.585
Cyclohexanes	0.201	-2.462	2.936	0.556	-2.349	3.547
Iso-/anteiso-alkanes	<b>0.635</b>	0.015	1.258	<b>0.668</b>	0.020	1.319
<i><b>COPD</b></i>						
PAHs	0.233	-0.439	0.909	0.060	-0.669	0.794
Hopanes	-0.365	-0.997	0.270	-0.476	-1.157	0.211
n-Alkanes	-0.191	-0.938	0.562	-0.163	-0.984	0.665
Cyclohexanes	3.460	-1.820	9.024	4.728	-1.134	10.938
Iso-/anteiso-alkanes	0.475	-0.641	1.604	0.580	-0.611	1.786
<i><b>Pneumonia</b></i>						
PAHs	0.124	-0.398	0.649	0.163	-0.400	0.730
Hopanes	-0.247	-0.737	0.244	-0.280	-0.806	0.248
n-Alkanes	0.158	-0.419	0.738	0.020	-0.608	0.653
Cyclohexanes	-3.012	-6.797	0.926	-2.257	-6.452	2.126
Iso-/anteiso-alkanes	<b>1.073</b>	0.221	1.932	<b>1.199</b>	0.300	2.107



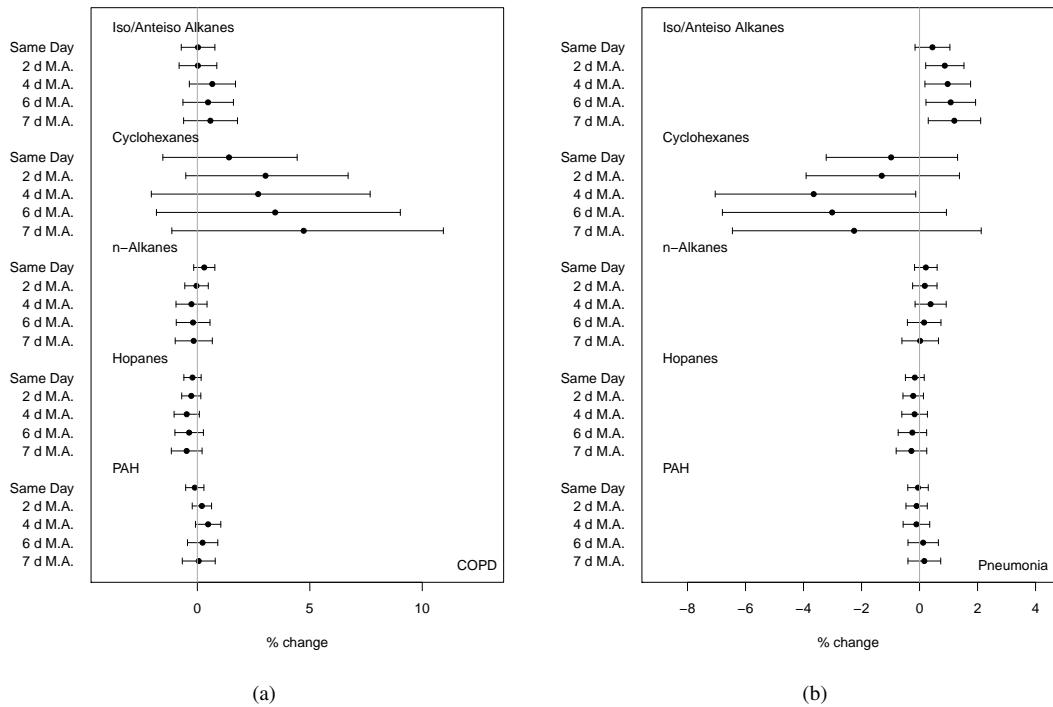
(a)

(b)

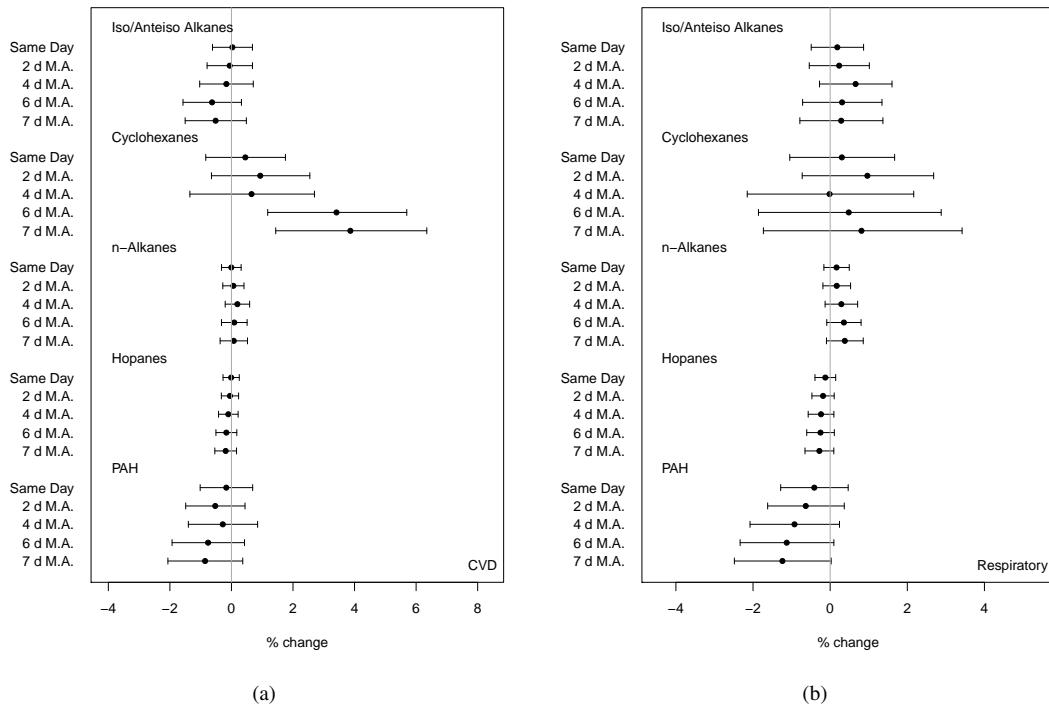


(c)

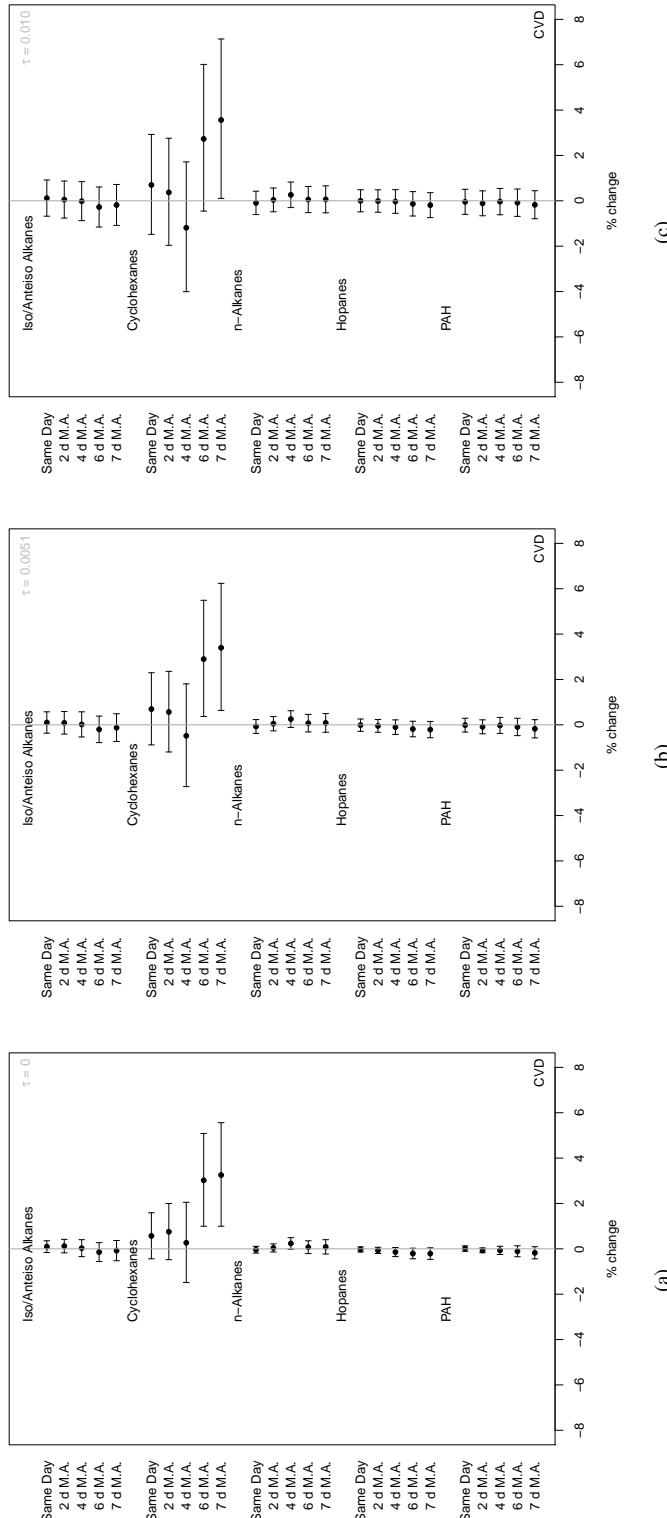
**Figure A-1:** Percent change in (a) CHF, (b) IHD and (c) MI hospital admissions per IQR increase in pollutant group for all exposure windows – same day exposures and 2-, 4-, 6- and 7-d moving averages (M.A.).



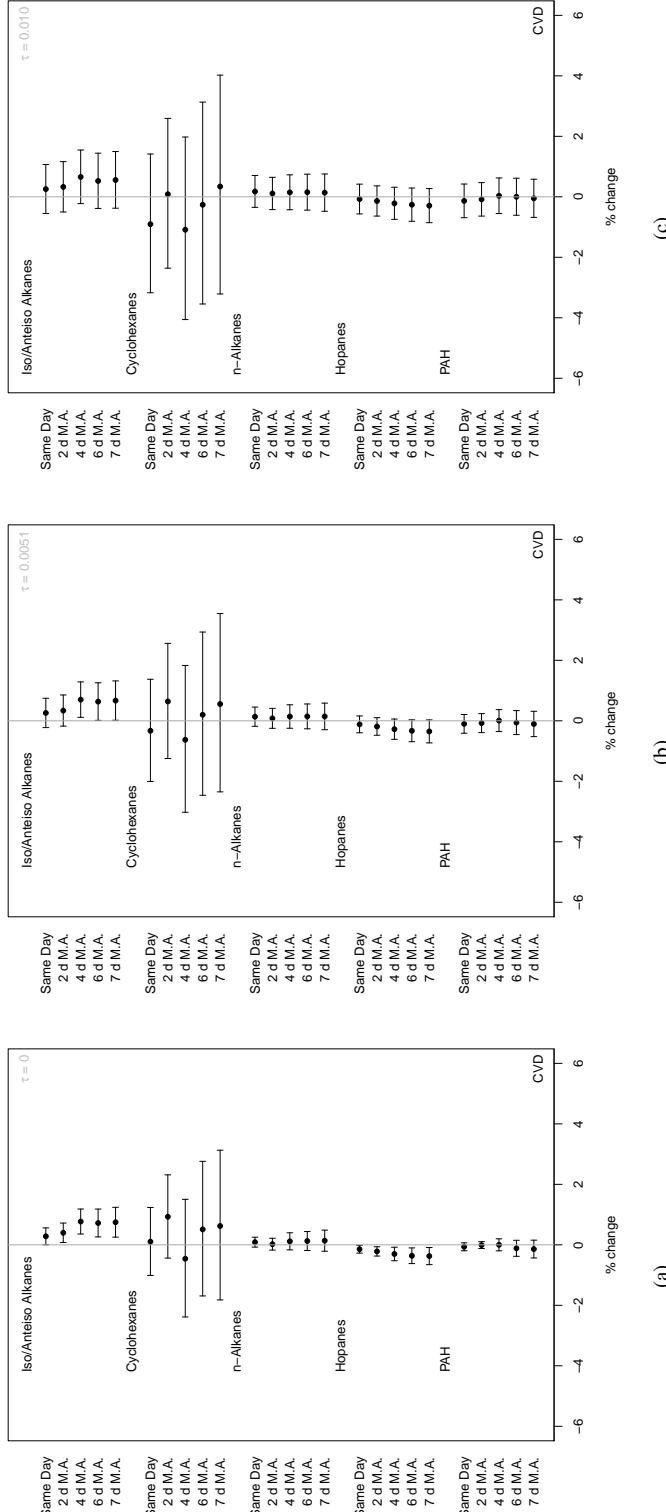
**Figure A-2:** Percent change in (a) COPD and (b) pneumonia hospital admissions per IQR increase in pollutant group for all exposure windows – same day exposures and 2-, 4-, 6- and 7-d moving averages (M.A.).



**Figure A-3:** Percent change in total (a) CVD and (b) respiratory hospital admissions per IQR increase in pollutant group for all exposure windows, when species with at least 75% of available observations above the LOD were included in the analysis.



**Figure A-4:** Sensitivity analyses on the choice of  $\tau^2$ : Percent change in total CVD admissions for (a)  $\tau^2 = 0$ , (b)  $\tau^2 = 0.0051$  (main analysis) and (c)  $\tau^2 = 0.0010$  per IQR increase in pollutant group for all exposure windows.



**Figure A-5:** Sensitivity analyses on the choice of  $\tau^2$ : Percent change in total respiratory admissions for (a)  $\tau^2 = 0$ , (b)  $\tau^2 = 0.0051$  (main analysis) and (c)  $\tau^2 = 0.0010$  per IQR increase in pollutant group for all exposure windows.